

# Competing Marxist Theories on the Temporal Aspects of Strike Waves: Silver's Product Cycle Theory and Mandel's Long Wave Theory

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## **ABSTRACT**

Despite the profound changes in capitalist development since the industrial revolution, strike waves and mass strikes are still a feature of the twenty-first century. This article examines two Marxist theories that seek to explain the temporal aspects of strike waves. In the main, I argue that Silver's product cycle theory, suffers from an over-determinism, and that turning point strike waves are not mainly determined by lead industries. Mandel's long wave theory argues that technological innovations tend to cluster and thus workers in different industries feature prominently in strike waves. By re-examining and comparing two competing Marxist theories on the temporality of strike waves and turning points, I will attempt to highlight the similarities but also place emphasis on where the theories differ. I examine the applicability of the theories to the South African case, and reference recent world events in order to ascertain the explanatory power of the competing theories. In the main I argue that Silver's product cycle lead theory does not fit the South African experience.

## **KEYWORDS**

turning point strike waves; product cycle; long waves; capitalism

## **Introduction**

Despite the profound changes in capitalist development since the industrial revolution, strike waves and mass strikes are still a feature of the twenty-first century. This article examines two Marxist theories that seek to explain the temporal aspects of strike waves. Both theories are especially concerned with strikes that alter labour–capital relations, or turning points, and both focus on the world-historical scale. For Beverly Silver, the product cycle is key to understanding the temporal pattern of turning point strike waves, while for Ernest Mandel it is the capitalist long waves of expansion and contraction. In the main, I argue that Silver's product cycle theory suffers from an over-determinism, and that turning point waves are not mainly determined by lead industries. Mandel's long wave theory argues that technological innovations tend to cluster and thus workers in different industries feature prominently in strike waves. By re-examining and comparing two competing Marxist theories on the temporality of strike waves and turning points, I will attempt to highlight the similarities but also place emphasis on where the theories depart from each other. I examine the applicability of the theories to the South African case, and reference recent world events in order to ascertain the explanatory power of the competing theories. In the main I argue that Silver's product cycle lead theory does not fit the South African experience.

## Definitions of Strike Waves

In the literature, there is no accepted definition of a general strike or a strike wave, and the definitional disputes are significant. Kelly (2012: 1033) argues, “There is no generally agreed-on definition of the term general strike or its various synonyms, such as political strike and protest strike”. He defines a general strike as “a temporary, national stoppage of work by workers from many industries, directed against the executive or legislative arms of government, to enforce a demand or give voice to a grievance”. Kelly, however, does not describe these strikes as strike waves. Can a general strike not be a strike wave?

The South African Marxist historian Baruch Hirson (1993: 65) wrote a paper titled “The General Strike of 1922”; the strike was later named the 1922 Rand Rebellion. However, Webster (2017: 142) refers to the general strike of 1922 as a strike, and the strike wave in South Africa in 1973 as mass strikes; both of them represented turning points in his view. Neither Hirson nor Webster provide definitions of the types of strikes. Boll (1989: 56), however, defines strike waves as those periods where strikes exceed “normal” increases in strike activity, “having marked significant high points in both political and trade union activity”. Boll’s definition of a strike wave does appear to incorporate most of the characteristics of a general strike described by Kelly, as general strikes which cover several industries do not appear to represent a normal pattern in strike dynamics unless they take place in a country experiencing heightened class struggle.

Mandel (1995: 126–7), on the other hand, incorporates all strikes – general strikes and strike waves – into the concept of class struggle cycles without offering any definitional clarification of the concepts used except that they tend to cluster around the turning points of long waves of capitalist development. In an earlier work, Mandel (1980: 498) qualifies his use of the term mass strikes to mean those periods when the class struggle intensifies, and combines the “economic and the social – in other words, *political* – class struggle”. In other words, the mass strikes are combinations of semi-political and political strike waves.

Silver (2003b) tends to use the concept of “wave of labour unrest” interchangeably with a “strike wave”. She says, “Japan did experience a major wave of labor unrest ... [while] ... the newspaper indexes did not single out the automobile industry when reporting on the *strike wave* ... All relied on unconventional forms of protest – most notably the sit-down strike” (Silver, 2003b: 45, my emphasis). Furthermore, Silver (2003b: 47, 50) cites the example of the “strike wave” of autoworkers in the United States, while for Italy and France she states, “Both strike waves were notable for the use of the sit-down strike and factory occupation tactic”. Silver also describes the European strikes of the late 1960s and the Brazilian, South African and South Korean strikes of the 1980s as “strike waves” (Silver, 2003b: 52, 55, 59). She refers to “high points of labour unrest of textile and autoworkers” as significant “labour unrest waves” (Silver, 2003b: 82–4). For Silver (2003b: 35), there are also non-strike forms of labour unrest such as factory occupations, riots, sabotage, undeclared slowdowns, demonstrations and absenteeism.<sup>1</sup> However, Silver does not explain why the latter forms are non-strike forms, since strike names are derived by their purpose or the tactic employed (Brenner, 2009: xxxvii). According to South Africa’s Labour Relations Act of 1995, a strike is defined as a “the partial or complete concerted refusal to work, or the retardation or obstruction of work” within which one can incorporate the

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<sup>1</sup> When absenteeism becomes a form of collective resistance because of a grievance and has as its aim the “retardation or obstruction of work” then it constitutes an undeclared withdrawal of labour power – the essence of a strike. The retardation or obstruction interferes in the Marxist sense with the drive for valorisation within the capitalist labour process (Atzeni, 2010: 20–1).

various tactics or forms Silver mentions. Despite Silver's non-strike forms, her elaboration of labour unrest waves – which represent turning points in labour capital relations – are nevertheless *strike waves* (Silver, 2003b: 195):

... the mass strike in Russia displays such a multiplicity of the most varied forms of action that it is altogether impossible to speak of 'the' mass strike, of an abstract schematic mass strike. All the factors of the mass strike, as well as its character, are not only different in the different towns and districts of the country, but its general character has often changed in the course of the revolution (Luxemburg, 2008: 120).

The potential dimensions of strikes can thus be hidden when scholars work within a narrow definition of a strike, strike wave or mass strike. In my view a strike wave will take different forms in different countries, employ similar or varied tactics depending on the particular circumstances and working-class traditions of struggle. Whether the strike wave takes the form of a general strike or multiple strikes in various industries, occupations and demonstrations does not put into question that a “significant” change in the level of contestation between labour, capital and the state has occurred. Each strike wave, notwithstanding similarities where they exist, will have unique combinations making up the strike wave. Then what are turning point strikes and turning point strike waves?

When offensive strikes occur, they can generate an extraordinary amount of pressure on the social system, which often leads to structural changes such as the reconfiguring of the industrial relations, economic or political system. These kinds of events are referred to as a “turning point” (Alexander, 2013; Legassick, 2012; Webster, 2017). However, there is a tendency to treat turning point strikes and turning point strike waves as synonymous. The exception is Alexander (2013: 605), who correctly demonstrates that turning point strikes are those strikes that set off and mark the beginning of strike waves, but he mistakenly reduces the structural effects of those waves solely to the turning point strike. Silver (2003b: 195) does not refer to turning point strikes, but rather to turning point waves of labour unrest, which she argues affect the course of history of labour–capital relations and are the motors of socio-political change which ultimately register structural changes. The relative importance of the turning point strike and the combined effect of the turning point strike wave is not resolved in the literature.

In my approach, I combine the analysis to include the turning point strike and the turning point strike wave. In my view, a turning point strike, which is an event, acts as a trigger or spark that sets off a wave of strikes – a strike wave that ultimately leads to structural changes. The latter constitutes a turning point strike wave in which economic demands *can* play a predominant role over political demands. A mass strike, on the other hand, is a turning point strike wave in which the political dominates and, depending on the length of the wave, an oscillation occurs between the economic and the political or a combination of both – the varied outcome of which is political reform, revolution or defeat. On the whole, the varied combinations of strikes, general strikes, demonstrations, occupations, strike waves and turning point strike waves form the mass strikes.

## Measurement of Strike Waves

Silver (2003b: 194–5) uses the World Labour Group Database (WLGD) which produces a count of labour unrest but acknowledges that it “was not designed to produce a count of *all or even most incidents* of labour unrest ... but *changing levels* of labour unrest”. The count is derived from *The*

*Times* (London) and the *New York Times* and thus excludes government strike statistics. Mandel (1995: 126) derived his general class struggle trend from historical knowledge and not from empirical data. However, Mandel (1995: 126) argued that, despite his approach, “Silver has drawn up a curve based on newspaper reports of major workers’ struggles, which dovetails quite closely with my own projected curve”. In other words, the temporality of strike waves between Mandel and Silver’s work are similar.

Silver (2003b: 195), borrowing from Shorter and Tilley (1974), defines the year in which the number of strikes is at least 50 per cent higher than the mean of the previous five years as the year in which a strike wave commences.<sup>2</sup> However, Franzosi (1995: 259–61) argues that this operational definition of a strike wave is inadequate, as the 1969 Italian strike would not qualify as a wave year, despite its historical peak in the number of days lost. Furthermore, strike waves may occur over a number of years and thus the determination of a single year may disqualify the strikes as a wave year.

While Silver (2003b: 82) mentions that the Russian Revolution had a wave year in 1917–1918, the textile sector does not appear on her high points of labour unrest. This is despite the fact that textiles accounted for 13.4 per cent of all strikes and 33 per cent of 2.4 million strikers (Koenker and Rosenberg, 1989: 175–6). Similarly, Koenker and Rosenberg (1989: 182) argue if the operational definition of a strike year is applied to the February 1917 Revolution in Russia, it would not be considered as a wave year. On the other hand, Beittel’s (1995: 93) findings suggest that indicators of the number of working days lost as established by Bordogna and Provasi (1979) can also be used to identify strike waves.

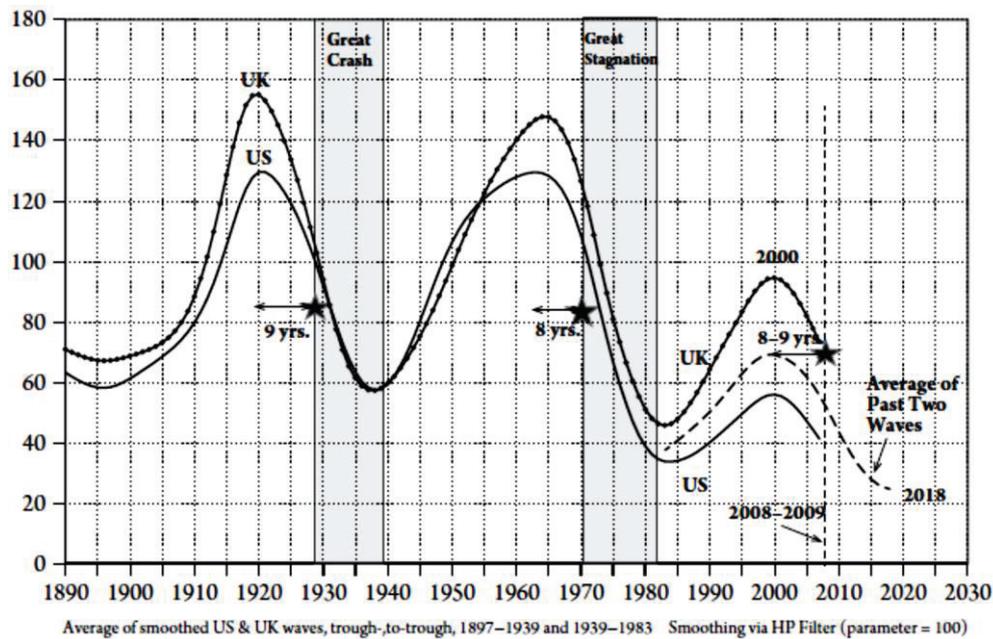
Noting the discrepancies in measuring strikes waves above, three key aggregate measures of strikes should be used to test the presence of strike waves – the number of strikes = frequency (F), number of strikers = size (S), and days lost (D). There would be variations of F, S and D regarding the specificity of the country under study. Due to limitations of space, this article will not investigate the quantitative aspects of Mandel’s long wave (Figure 1) and Silver’s product cycle (Figure 2) save to say that with new econometric techniques, convincing evidence was provided to prove the existence of long waves (Kleinknecht, Mandel and Wallerstein, 1992: 5). Silver appears to provide a conceptual model of the product cycle and does not provide empirical evidence as such. However, both theories combine economic, social and political factors and accord a relative autonomy in their expositions on the temporal aspects of strike waves and turning points.

In Mandel’s (1995: 30–1) long wave, there is an asymmetrical, rhythmic alternation between radical technological revolutions (during expansionist long waves) and basic cost-cutting technologies (during depressive waves). During an expansive long wave, there is a reluctance to radically change labour organisation, as this would interrupt high levels of profit. Experimentation with the labour process normally takes place at the end of the expansionist wave – a turning point that develops into a “long term struggle cycle” (Mandel, 1995: 34–6). Mandel (1995: 76) argues that there are exogenous factors such as “changes in the overall balance of class forces and inter-capitalist relationship of forces, the outcomes of momentous class struggles and of wars” that can lead to radical upheavals in the average rate of profit and thus move from a stagnating long wave into an expansionary long wave. Further, the movement from an expansive long wave to a long wave of contraction is considered as “endogenous whereas the

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<sup>2</sup> In her methodology, Silver made an additional qualification for a wave year as the year in which the number of labour unrest mentions in a country is 50 per cent more than the mean over an eighty-five year period.

upturn is not, but rather is dependent on those radical changes in the general historical and geographic environment of the capitalist mode of production that can induce a strong and sustained upturn in the average rate of profit” (Mandel, 1995: 42). As we can see in Mandel’s scheme, there is both an endogenous (the downturn from an expansive long wave) and exogenous (the upturn from a depressive long wave) turning point.



Source: Anwar Shaikh (2016)

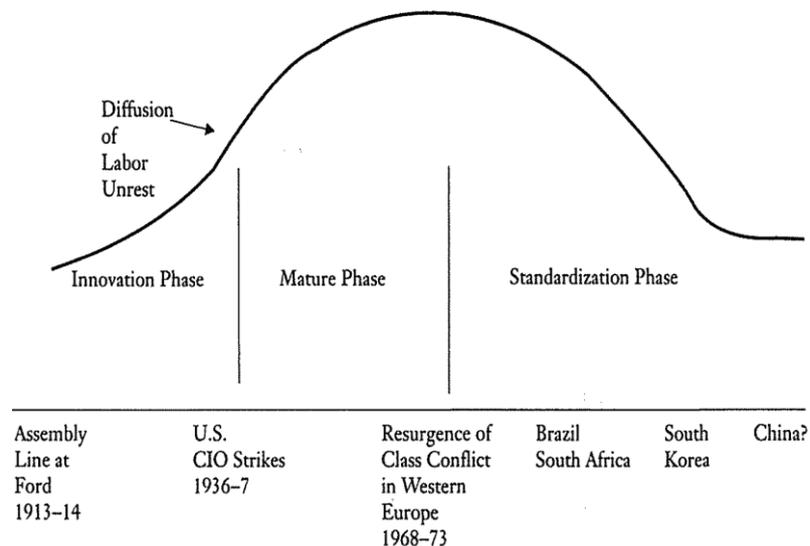
Figure 1: Long waves of capitalist development<sup>3</sup>

In Silver’s (2003b: 76), methodology, she “introduces a critical reformulation of the product cycle” and “from this reformulated perspective, historical capitalism has been characterised by a series of overlapping product cycles” within which “working class formation and protest are key processes underlying both the shifts from phase to phase within a product cycle and a shift from one product cycle to the next”. Furthermore, the spatial and technological fixes “combine with labour unrest in specific ways” (Silver, 2003b: 76). Thus, “we would expect the main sites of twenty-first-century labor unrest to be found in the new leading industries of the day” (Silver, 2003b: 122). For Silver, the product cycle is the unit of analysis of historical capitalism, and for Mandel it is the long wave in which he locates the temporal aspects of strike waves – those strikes that alter labour–capital relations or turning points. They thus both focus on the world-historical scale. Silver (2003b: 131), like Mandel, also focuses on the temporal aspects of labour unrest in relation to world wars where “the world war dynamic overwhelmed product-cycle dynamics” – the exogenic factor. Furthermore, she distinguishes between Marx-type and Polanyi-type struggle:

By Polanyi-type labor unrest, we mean the backlash resistances to the spread of a global self-regulating market, particularly by working classes that are being unmade by global economic transformations as well as by those workers who had benefited from established social compacts

<sup>3</sup> I have used Sheikh’s (2016) updated econometric analysis of long waves as it is more useful for the purposes of analysing contemporary events.

that are being abandoned from above. And by Marx-type labor unrest, we mean the struggles of newly emerging working classes that are successively made and strengthened as an unintended outcome of the development of historical capitalism, even as old working classes are being unmade (Silver, 2003b: 20).



Source: Beverly Silver (2003b)

**Figure 2: The automobile product life cycle and labour unrest waves**

Implicit in Silver’s definition is a reproductive scheme which concerns the unmaking and making of old and new working classes, as products of commodification and de-commodification. Further, she argues that for Marx the major struggles are at the point of production and for Polanyi they are in the labour market (Silver, 2003b: 17). However, Marx (1990: 711) had always argued that “every social process of production is at the same time a process of reproduction”. In the contemporary period:

...the real consequences of the reduced turnover-time of fixed capital, of the accelerated obsolescence of machinery ... in the capitalist mode of production is a shift in the emphasis of the activity of the major owners of capital ... [where] ... *it lies in the sphere of reproduction* (Mandel: 1980: 245, emphasis in the original).

In other words, government, business and trade unions collaborate under late capitalism to set the *market price* of labour power in the reproductive sphere. This was indeed the development in the golden age, which eventually did not resolve the valorisation problem for capital because the Keynesianism could only provide a temporary solution within a system where the turnover time of fixed capital (which has a direct impact on profits) has been rapidly reduced due to capitalist competition. This process at the same time had a direct impact on the unmaking and making of the working class where “the struggle over the rate of surplus-value moves into the centre of the dynamic of economy and society” – that is, a unity of production and reproduction (Mandel, 1980: 239, 473). Similarly, Silver concludes that the struggle against commodification in the twenty-first century “depends, among other things, on how Polanyi-type and Marx-type labor unrest combine” (Silver, 2003a: 2). Is the combination of types of struggle that Silver refers to not mass strikes?

A distinction, however, is that while long wave theory's phases of capitalist development incorporate technological revolutions and recognise lead industries, strike waves are the outcome of the *aggregate* decline in the rate of profit and changes in the labour process in which strike waves and turning points are the combined outcome of workers protest in different industries. Silver, while recognising technological revolutions and lead industries/products, demonstrates the shifting nature of strike waves within and between industries; she maintains that high-point strike waves (turning points) are based on the domination of the leading industries/products. I will examine this aspect more closely later in the article. Mandel's model leaves open the exact source of strike waves as its dynamic within industries *cannot be predetermined*. However, the first strike wave will signal that the revolutionary road has begun and in this process each strike, regardless of its source and demands, is of critical importance (Mandel, 1964: 498).

## South Africa

Silver's characterisation of turning points and lead product cycle/industries does not fit the South African experience. The 1922, 1946 and 2012 turning points are in the mining sector, the 1973 turning point strike wave, in which textiles played a leading role, does not feature in Silver's periodisation of high-point waves, and, finally, the 1979–1980s strike wave, was not in the main due to workers in the auto industry.

The 1973 turning point marked gigantic leaps in terms of frequency of strikes ( $F = 370$ , or 70 per cent more than the average of the preceding five years), size of strikes ( $S = 98\,378$ , or 4 847 per cent more) and days lost ( $D = 229\,281$ , or 6 325 per cent more). The 1973 turning point strike wave was unprecedented as it was widespread over a range of industries. The turning point strike of 2 000 migrant and contract workers in Durban at a new brick factory built in a *minor* industrial area (which had new technological innovations and thus a new labour process) is regarded as the seminal historical event, the "initial rupture ... [which set off] ... a chain of occurrences that durably transforms previous structures and practices" (Sewell, 1996: 843). Furthermore, it was only once workers at the Frametex textile factory in New Germany went on strike that "a trickle of strike action began to turn into a wave" where strikes were of longer duration and "played an important role" in spreading the strikes throughout Durban's industrial areas (IIE, 1974: 16, 22).

Silver had mistakenly identified the high-point 1979 automobile strikes as the turning point, as they were identified as the final straw in prompting the legalisation of trade unions because of "a new and uncontrollable wave of strike action" (Silver, 2003b: 59, quoting Seidman, 1994: 185). In fact, the strikes in 1979 do not measure as a wave year; rather, they represent a low point, an ebb in the 1970s strike wave which came at the end and the beginning (a lapse of one year) of the next wave of strikes. The legalisation thus came at the end of the first wave (six years later, in 1979) as "historical events are never instantaneous happenings: they always have a duration, a period that elapses between the initial rupture and the subsequent structural transformation" (Sewell, 1996: 845).

Silver (2003b: 59) argues that the automobile "workers formed the frontline of the battle in the early 80s". As one can observe in Table 2, Silver's argument does not fare well with the facts. In terms of the entire period from 1979 to 1986, the auto industry has the fourth highest frequency of strikes. Overall, the metal industry, followed by food and retail, have the highest frequency of strikes. Despite the dominance of metal, one observes that there are dynamic shifts in the top five industries over the entire period, and finally mining overtakes metal as the leader in terms of strike frequency during 1985–1986.

**Table 1: Industries with the highest strike frequencies, 1979–1986**

All Records	1979–1982	1983–1984	1985–1986
Metal	Metal	Metal	Mining
Food	Food	Retail	Auto
Retail	Auto	Food	Food
Auto	Textile	Mining	Metal
Building	Building	Auto	Chemical

*Source: Andrew Levy and Associates (1986)*

If we consider the total distribution of strikes between 1979 and 1986, the picture changes somewhat. Metal accounts for 18.4 per cent of strikes, retail 12 per cent, food 10 per cent and auto 9 per cent. According to Levy and Associates (1986: 12), “Overall however, [the] metal engineering sector remains the most troubled with strike action ... [and] ... the retail sector remains consistently important overall amongst the major sectors experiencing strike action”.

Lastly, if we consider days lost for the period 1979–1986, mining accounts for 42.8 per cent, auto 21.3 per cent, metal 17.9 per cent, food 9.6 per cent and chemical 8.4 per cent. The mining industry thus leads in terms of the number of days lost, mainly because of the large size of operations and the huge numbers of labourers employed. Similarly, the auto industry in general has large plants, while in metal the number of days lost is accounted for because of the high number of strikes. In other words, days lost in metal relates to higher strike frequencies rather than the size of the operations (Levy and Associates, 1986: 12).

Thus if we consider strike frequency, days lost and distribution of strikes taken as a whole, the autoworkers did not play the leading role. In terms of number of strikes, metalworkers displayed a high level of organisational capacity in order to execute a higher number of strikes in smaller operations. On the other hand, mineworkers displayed the most persistent struggle, indicating a willingness to make sacrifices in advancement of workers’ demands, while retail maintained a level of consistency throughout the whole period. In fact, the “frontline of the battle” in the 1980s was not the auto strikes but those in mining. The National Union of Mineworkers had declared 1987 as “The Year Mine Workers Take Control” and adopted a policy for “a democratic socialist society controlled by the working class” (Baskin, 1991: 214).

An evident underlying aim of the strike was to demonstrate wide worker support for an agenda ranging from sanctions to seizure of control of the national economy (Chamber of Mines Economics Department, 1994: 63).

The mining strikes were intense and centred on the control of the compound and food supplies. Anglo American, a gold producer, treated the strike “like a war” and with the assistance of government cut off international donations for the strike and ensured that workers could not access any funds saved in commercial banks (Baskin, 1991: 226–9). As the strike entered its third week 50 000 workers were dismissed, which was achieved through combining repression with lockouts. Nine miners were killed, 300 were wounded and more than 400 were arrested in clashes with mine guards during the strike (Baskin, 1991). The 1987 strike wave had raised the spectre of communism and it was this that tilted the balance of forces, prompting the apartheid government to announce major political reforms in 1990 that would lead to a transition to end apartheid – the structural effect. Thus, the turning point strike wave of the 1980s was led politically by mineworkers – a new interpretation of the 1987 turning point effect of the miners’ strike.

I shall now assess the veracity of long wave theory in explaining the temporality of turning

point strike waves. Mandel argues that there is a tendency for technological innovations to cluster and thus workers in different sectors are simultaneously affected by technological change even though there is a tendency for industries that are undergoing rapid technological revolution to feature prominently in the explosion (as in the brick factory). In the South African case such a clustering took place where research and development increased rapidly in the mid-1960s in the mining, manufacturing and agriculture sectors (Gelb, 1991: 116–17), which in part explains the magnitude of the turning point strike waves of the 1970s and 1980s.

Thus Hobsbawm states:

Only individual analysis can reveal the specific combination of tensions, which make up any given ‘explosion’ and attempts to discover exactly the same combination (as distinct from the general family of resemblance in the patterns) are likely to be unsuccessful (Hobsbawm, 1968: 174).

Hobsbawm (1968: 145) insists that “explosions” or strikes waves can only be analysed within their specific contexts as each of the explosions would be unique. In practice these various sorts of patterns of the “general family” are combined to cause an explosion: static and expanding industries, technically inert and dynamic ones, short- and long-term cycles, time lags. One notices that Hobsbawm lists all “static and expanding ... technically inert and dynamic” industries to give combined effect to the “explosion”. Silver’s insistence on searching for the lead industry to “discover the same combination” will not allow for a holistic analysis of the strike dynamic and turning point strike waves in the twenty-first century. This is demonstrated by her treatment in identifying “the” lead industry.

In line with the explanation above, which is consistent with long wave theory, all the offensive strikes are regarded as turning points in South Africa. The white miners’ 1922 Rand Rebellion gave rise to a regime that protected white labour (Webster, 2017: 142), the African Mine Workers’ Strike of 1946 led to the reconfiguration of national politics and the establishment of apartheid (O’Meara, 1975: 146), the 1973 Durban Strikes “led to the reconfiguration of the industrial relations system and the emergence of an independent workers’ movement” (Webster, 2017: 143) and the 2012 Marikana Strike led to a breakdown in the hegemony of the African National Congress and the establishment of new political opposition with the formation of the Economic Freedom Fighters and the South African Federation of Trade Unions (Alexander, 2013: 616; Cottle, 2017: 166). The turning points align well with the expansive and depressive long waves (see Figure 1). Application of long wave theory to South Africa allows one to see turning points here as part of the twentieth-century international strike waves including the war years. These strike waves peaked around 1919–1920 [the Russian Revolution took place in 1917], then 1946–1947, each after a world war. There was also a resurgence in strike waves at the end of the 1960s and early 1970s in Europe (Hibbs, 1978: 153).

Silver’s (2003b: 44) temporal profile of the automobile strike waves in the 1980s and 1990s in Brazil, South Africa and South Korea correlates with the intensification of class struggle towards the end of the long wave which troughed between 1980 and 1990 (see Figure 1). What factors explains this sustained struggle of the auto industry in these countries of the South? Mandel argues that the patterns of industrialised and less-industrialised countries will not be the same, and even if one compares a range of industrialised countries there will be variations in time since economies are never completely synchronised. The deviations from the general trend can then be explained in relation to the specific circumstances of each country (Mandel, 1992: 319).

In contrast to industrialised countries, the common factor between Brazil, South Africa and South Korea is one of a unity between the economic and political struggle against dictatorships, high levels of repression and lack of freedom of trade unions. The depth of the economic and

political crisis in the South took place in the context of weak countertendencies, while strong countertendencies (democratic rule, partial incorporation of trade unions and trade union rights) were prevalent in the North. The trade unions in the South were thus “also key ‘subjects’ behind the spread of democracy in the late twentieth century” (Silver, 2003b: 6).

Lee argues that Silver

...sometimes retreats from her more deterministic moment, wavering between her predictions of, on the one hand, a strong and independent labor movement arising in China, the site of the latest round of global auto investment (p. 65), and on the other hand, the decline of autoworkers’ role in labor militancy together with the loss of the industry’s leading role in capitalist development (p.73) (Lee, 2003: 5).

In a later work Silver (2014: 63), while acknowledging the key role of the automotive sector in China in the 2010 strikes, nevertheless changes direction and argues that five of the six top Fortune 500 employers are in the retail sector, and thus a possible new site of working-class formation; labour unrest in this sector could make it the lead industry in the twenty-first century. However, her focus and uncertainty in identifying the lead industry or product overshadows her ability to see the historical turning point in the technology sector in China.

The industrial/labour unrest reached its peak during the suicides at the Foxconn plant in southern China, which drew serious public attention. Between May and June 2010, sixteen workers had jumped from the high buildings at the factory, resulting in thirteen deaths. This can be seen as an historical turning point, because ever since there has been an increase in strikes and collective labour disputes everywhere in China. (Li, 2017: 132)

Silver (2014: 51) omits the suicides in her elaboration of the strike wave of 2010 in China and only emphasises the autoworker strikes. She thus misses the significance of this new but dreadful, limited form of protest.<sup>4</sup> The suicides took place at the point of production and reproduction, as the employees work and live within the same industrial complex. Marx (1976: 1084) was in particular concerned when workers were directly dependent on the employer for accommodation because of the extent of control over the workforce and the constraints placed upon their freedom, especially to strike.

In the aftermath of the suicides, widespread strikes took place in June among the automobile, metalwork and coalmining sectors (Li, 2017: 132). The outcome of the protest was a 70 per cent increase in wages (Macartney, 2010). On 28 October 2010, the Law on Social Insurance was passed; it was the first comprehensive law on China’s social security system ever adopted covering pension, medical aid, workers compensation, unemployment insurance and maternity insurance (Global Legal Monitor, 2010). This represented the structural effects.

Further, when Silver (2014, 2016) elaborates on the role of labour in Egypt during the Arab Spring and the strike wave in South Africa, she does not conclude that these were turning points. The source of the Egyptian Revolution lies in the strikes in the early depressive long wave, which more than doubled in 2004. The spontaneous strike wave against cost-cutting measures in textiles “was the center of gravity of the movement” which later spread to virtually all industrial sectors in the context of accelerated privatisation and gave rise to the first independent unions (Beinin: 2009: 450–1) – the structural effect. Workers furthermore took centre stage in the revolution at a point when Mubarak’s departure was uncertain. This uncertainty was finally broken when

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<sup>4</sup> These actions, which might be referred to as *collective bargaining by suicide*, reflect an important link since the suicides may have been the trigger of the turning point strike wave.

workers began intensive strike action in both public and private sectors across Egypt. The military, fearing a wider strike movement and increasing damage to the Egyptian economy, swiftly moved to shepherd Mubarak out of power – the structural effect (Shenker, 2011; Beinin and Duboc, 2015: 9). These strikes and mass strikes were not related to leading industries of the twenty-first century but were the combined, spontaneous responses to neo-liberal measures from *weak* movements of unionised and non-unionised workers, students, social movements and vast layers of the reserve army of labour. The combination of economic and political demands ensured a wide mass movement at the point of production and reproduction.

Importantly, when reflecting on South Africa Silver completely leaves out the spontaneous, 2012 Farm Workers Revolt, which unfolded in both the sphere of production and reproduction, and which took place a week after the Marikana turning point strike in mining. Again, this turning point strike wave is not related to a lead industry. The international character of the turning points, strike waves and mass strikes in the twenty-first century align with the intensification of class struggle toward the end of the depressive long wave (Figure 1). Here we can include the major strikes, general strikes and mass strikes in Portugal, Spain, Greece, China, United States, United Kingdom, Iceland, Turkey, Egypt, Tunisia, Germany, France, India, Cambodia and Brazil between 2010 and 2018 (Gallas and Nowak, 2016).

Mandel, while being able to define a lead industry, does not attempt to reduce the class struggle to specific industries at the point of production or reproduction. This approach is consistent with former Marxists who have rather tended to focus on the outcomes of strikes (the relative autonomy), pointing *politically* to shifts in the leading role of sections of the working class and class consciousness as the course of class struggle unfolds.

## Conclusion

In this article I have demonstrated that Silver's characterisation of turning points and the role of lead product cycle/industries does not fit the South African experience. The 1922, 1946 and 2012 turning points are in the mining sector; the 1973 turning point strike wave, in which textiles played a leading role, does not feature in Silver's periodisation of high-point waves; finally, the automobile strikes did not play the leading role in the 1979–1980s turning point strike wave. While the approaches of both Silver and Mandel show a similarity in the temporality of strike waves internationally, Mandel's approach does not confer a leading role to workers in lead industries as this can only be determined in the course of struggle. Further, as the product cycle is a conceptual model it makes the identification of the lead industry hard to establish especially in the context of rapid technological innovation and rapid obsolescence in the twenty-first century. Mandel's long wave theory argues that technological "cost-cutting" innovations tend to cluster at the end of the expansive long wave and thus workers in different industries are jointly but unevenly affected, the combinations of which give rise to strike waves. Within the latter framework, South Africa's turning point strike waves have historically aligned internationally with strike waves around the peaks and troughs of long waves.

The strength of Silver's product cycle lies in its ability to explain the changing spatial dimension of class formation and protest in both the global North and South in terms of economic, social and political factors. Mandel's strength lies in the predictive power of long wave theory to determine the timing of peaks and troughs of long waves, and with this the changes in the tempo of the class struggle internationally. This is a significant distinction since the lack of interest in long wave theory has greatly disarmed the left in foreseeing and preparing for the working-class upsurges at the beginning of the twenty-first century.

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